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– (See Abrosimov, N. K.) – 1399 [1769]
Dnestrovskii, Yu. N. and N. L. Pavlova. Flute Instability in a Magnetic Field with Minimum B. (T) – 64 [89]

– (See Gurevich, A. V.) – 443 [572]
Doinikov, N. I. and A. S. Simakov. Modified Scalar Potential in Boundary-Value Problems in Magnetostatics. (T) – 658 [835]
Dolgopolov, V. V. (See Demchenko, V. V.) – 661 [839]
Dovbnya, A. N. and V. V. Petrenko. Monochromatization of the Beam in a 2-GeV Electron Linear Accelerator Using the Debunching Properties of the Shaping System. (T) – 608 [776]
– (See Grishaev, I. A.) – 610 [779]
– (See Grishaev, I. A.) – 613 [783]
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Dudko, D. Ya., Yu. P. Korchevoi, and V. I. Lukashenko. Elastic Interactions and Recombination in a Potassium Discharge. (E/T) – 919 [1164]
Dugar-Zhabon, V. D. (See Golovanivskii, K. S.) – 75 [104]
Duovil, L. V. (See Berezin, A. B.) – 1844 [2323]
Dushin, L. A., A. I. Skibenko, and I. P. Fomin. Refraction of the Extraordinary Wave in a Cross Section of an Anisotropic Plasma Cylinder. (T/E) – 1291 [1640]
D'yachenko, V. V. (See Budnikov, V. N.) – 404 [520]
D'yachkov, B. A. and V. I. Zinenko. High-Intensity Source of He^- Ions. (E) – 305 [404]
– V. I. Zinenko, and M. A. Pavlii. Production of H^- Ions by Charge Exchange of 1.5 to 10 keV Protons in Thick Vapor Jets of Li, Na, K, and Mg. (E) – 1868 [2353]
Dykovskii, Yu. A. (See Ashmarin, I. I.) – 1881 [2369]
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Dyuzhev, G. A., V. B. Kaplan, B. Ya. Moizhes, and V. G. Yur'ev. Highly Ionized Cesium Arc. (E) – 350 [453]
– B. Ya. Moizhes, E. A. Startsev, and V. G. Yur'ev. Voltage Arc in Cesium Vapor and Low-Pressure Cesium Arc. (E) – 1900 [2 3]
– B. Ya. Moizhes, V. A. Nemchinskii, E. A. Startsev, S. M. Shkol'nik, and V. G. Yur'ev. Relaxation of the Cathode Beam in a Low-Temperature Plasma. (T/E) – 1910 [2406]
Ébralidze, T. D. (See Mumladze, V. V.) – 320 [424]
Egorov, D. I. (See Abrosimov, N. K.) – 963 [1222]
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Eliseev, B. V. and Yu. P. Mordvinov. Distribution of Charged Particles and Neutrals in a Positive Column. (T) – 2011 [2534]
Eliseev, V. A., G. A. Ryabov, and I. I. Tkach. Measurement of the Magnetic Field in the Leningrad 1-GeV Synchrocyclotron. (E) – 1415 [1787]
– (See Abrosimov, N. K.) – 1399 [1769]
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Evtushenko, T. P., V. Kh. Mkrtchyan, and G. V. Ostrovskaya. Spectroscopic Investigations of a Laser Spark. IV. Absorption Spectra in Hydrogen. (E) – 2049 [2581]
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Fursei, G. N. (See Bartashyus, I. Yu.) – 1535 [1943]
Gabovich, M. D. and I. A. Soloshenko. Plasma Oscillations in a Plasma Produced by an Ion Beam. (E) – 1281 [1627]
Gadion, V. N., V. G. Ivanov, G. I. Mishin, and S. N. Palkin. Measurement of the Conductivity of a Hypersonic Wake. (E/T) – 262 [350]
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– and G. P. Komarov. Stationary Electrolyte Flow in Low-Frequency Magnetic Fields. (T/E) – 1578 [1996]
Ganin, V. A. (See Bondarenko, Yu. V.) – 1015 [1292]
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– (See Bredikhin, M. Yu.) – 1766 [2226]
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– (See Aleksandrov, V. O.) – 47 [66]
– (See Anisimov, A. I.) – 546 [696]
Golovanivskii, K. S. and V. D. Dugar-Zhabon. High-Frequency Low-Pressure Discharge at the Electron Cyclotron Resonance. (E) – 75 [104]
– and A. D. Guseinova. Plasma Beam Produced by a Penning Discharge with a Strong Radial Electric Field. (E) – 1484 [1876]
Golubev, E. M., M. I. Demidov, N. N. Ogurtsova, I. V. Podmoshenskii, and P. N. Rogovtsev. Intense Discharge in an Open Channel with Evaporating Walls. (E) – 1381 [1750]
Golubovskii, Yu. B. and R. I. Lyagushchenko. Electron Transport Coefficients in Gases and Semiconductors. – 1947 [2454]
Goncharenko, D. K. (See Belikov, A. G.) – 1488 [1881]
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Grachev, M. I., K. I. Gubrienko, E. V. Eremenko, V. P. Kartashev, V. I. Kotov, A. V. Samoilov, V. S. Seleznev, and Yu. S. Khodyrev. Channel System for Negative Particles with Momenta up to 40 GeV/c. (E) – 1435 [1812]
Grebinskii, A. S. Effect of the Hall Field on the Interaction of Magnetohydrodynamic Waves in an Inhomogeneous Plasma. Magnetohydrodynamics. (T) – 915 [1159]
Gridin, V. A. (See Bykovskii, Yu. A.) – 338 [442]
Grigor'ev, Yu. P. Plasma Ion Source. (T) – 909 [1151]
– and P. M. Morozov. Optimization of Ion-Source Discharge Chamber Geometry. (T) – 1926 [2428]
Grinchenko, V. T. and M. V. Nesvizhskii. Vacuum Measurements in Sorption and Cryogenic Systems. (E/T) – 483 [621]
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– A. N. Dovbnya, and V. V. Petrenko. Longitudinal Bunch Compression. (T) – 610 [779]
– I. N. Gugel', A. N. Dovbnya, N. I. Mocheshnikov, and V. V. Petrenko. Beam Optics in the 2-GeV Multisection Linear Electron Accelerator. (T/E) – 613 [783]
Grishin, S. F., E. Ya. Grishina, V. Ya. Chernyshenko, and V. A. Kovalenko. Ultrahigh Vacuum (10^{-13} mm Hg) through Condensation Pumps. (E) – 1193 [1519]
– E. Ya. Grishina, V. A. Kovalenko, and V. Ya. Chernyshenko. Hydrogen Pumping with a Helium-Condensation Pump at Ultrahigh Vacuums. (E) – 1197 [1525]
– and E. Ya. Grishina. Calibration of Pressure Gauges down to 10^{-13} mm Hg by Means of an Ideal Condensation Pump. (E) – 1199 [1528]
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– (See Grishin, S. F.) – 1197 [1525]
– (See Grishin, S. F.) – 1199 [1528]
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Gross, L. P., G. M. Ivanov, L. A. Makhnenko, and A. V. Shal'nov. Interaction of a Train of Electron Bunches with a Waveguide Structure. (T/E) – 995 [1267]
Gryaznov, O. S. and B. Ya. Moizhes. Nodal-Point Solution of the Boltzmann Equation for a Partially Ionized Gas. (T) – 1110 [1410]
Gubkin, A. N. and M. M. Novak. Focusing Electrostatic Field Produced by Knife-Edge Electrets. (E) – 1337 [1697]
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Gurevich, A. V., Yu. N. Dnestrovskii, D. P. Kostomarov, and E. A. Glukhikh. Low-Density Plasma in an Electric Field. (T) – 443 [572]
Gurevich, L. É., I. D. Vagner, and I. V. Ioffe. Instability of a Plasma with Two Ion Species in a Magnetic Field with an Applied ac Electric Field. (T) – 334 [438]
Gurvich, D. B., D. N. Korkosh, and E. A. Svyadoshch. Magnetic Fields Produced by Currents in Coordinate Systems in Which Laplace's Equation is Separable. (T) – 1480 [1870]
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Gusev, O. B. and V. B. Konstantinov. Method for Determining the Spatial Resolution and Contrast of Holograph Systems. (T/E) – 170 [222]
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– I. I. Komissarova, G. V. Ostrovskaya, and L. L. Shapiro. Holograph Studies of a Laser Spark. III. Spark in Hydrogen and Helium. (E) – 550 [701]
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Ioffe, I. V. and A. I. Saet. Theory of the Bipolar Effect. (T/E) – 647 [825]
– and A. I. Saet. Adiabatic Convection in an Electric Field. (T) – 1586 [2004]
– (See Gurevich, L. É.) – 334 [438]
Ionov, N. I., Ts. S. Marinova, and M. A. Fedchenko. Isothermal Heat of Evaporation of Ytterbium and Neodymium Ions on a Tungsten Surface. (E) – 345 [449]
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– (See Ageev, V. N.) – 1742 [2196]
Iremashvili, D. V., S. V. Kuril'nikov, N. I. Leont'ev, T. A. Osepashvili, A. P. Timoshenko, and Yu. K. Udovichenko. Interaction of a 30 MW Electron Beam with a Plasma. (E) – 1278 [1624]
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Ivanov, N. V., G. P. Maksimov, A. I. Markin, S. L. Nedoseev, and V. P. Smirnov. Titanium-Hydride Injector. (E) – 58 [80]
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– R. I. Lyagushchenko, and N. Khristov. Homogeneous Positive Column in Helium at Moderate Pressures. (T) – 1627 [2053]
– and N. K. Mitrofanov. Electron Energy Spectrum in a Stratified Glow Discharge in Hydrogen. (E) – 1636 [2065]
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– (See Cherkasova, K. P.) – 952 [1207]
Kalygin, A. G., N. P. Kozlov, N. A. Koreshchenko, L. V. Leskov, and V. B. Saenko. Pulsed Erosion-Plasma Accelerator. (E) – 1650 [2084]
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– (See Zandberg, É. Ya.) – 1567 [1983]
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– L. V. Fedulina, and E. M. Yakushev. Deflection of Parallel Charged-Particle Beams by a Plane Electrostatic Mirror. (T) – 1444 [1825]
– L. V. Fedulina, and E. M. Yakushev. Paraxial Properties and Aberrations of a Two-Electrode Cylindrical Mirror. (T)–1449 [1832]
– L. V. Fedulina, and E. M. Yakushev. Combined Cylindrical Electron Mirrors. I. (T) – 1598 [2016]
– V. A. Rastorguev, and E. M. Yakushev. Eliminating the Curvature of Spectral Lines in a Prism Mass Spectrometer with Energy Focusing. (T) – 1603 [2023]
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– (See Kozlov, N.P.) – 1697 [2142]
Kichaeva, G. S. Transient Behavior of a High-Voltage, Low-Pressure-Triggered Spark Gap. (E) – 1552 [1963]
– and M. L Chepkalenko. Spectroscopic Study of a Controlled Discharge in a High-Voltage Vacuum Switch. (E) – 1704 [2151]
Kimel', L. R. and O. N. Salimov. Charged-Particle Distribution Function in a Condensed Medium with an Axially Symmetric Magnetic Field. (T) – 2089 [2628]
Kirichenko, G. S. and V. G. Khmaruk. Electron Heating in a Beam-Plasma Discharge. (E/T) – 1646 [2079]
Kirii, A. Yu. (See Andreev, N. E.) – 854 [1080]
Kiryushchenko, A. I. and M. A. Lebedev. Low-Voltage Arc in Cesium Vapor. I. Formation of a Spherical Plasmoid. (E) – 924 [1170]
Kislov, A. Ya. (See Zubkov, I. P.) – 409 [526]
– (See Zubkov, I.P.) – 695 [880]
Kislyakov, A. I. (See Abramov, V. G.) – 1520 [1924]
– (See Afrosimov, V. V.) – 1526 [1933]
Kitaeva, V. F., Yu. I. Osipov, L. S. Pavlova, V. M. Polyakov, N. N. Sobolev, and L. S. Fedorov. Microwave Determination of the Electron Temperature in an Ar^+ Laser. (E) – 1509 [1910]
Klimov, A. V. (See Gritskov, B. E.) – 1405 [1776]
Knyazyatov, A. S., P. E. Kovrov, E. G. Ladutin, V. V. Mal'tsev, and A. I. Morozov. Plasma Density in a Coaxial Injector with Shaped Electrodes. (E) – 707 [895]
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Komar, A. P., Yu. S. Korobochko, V. I. Mineev, and A. F. Petrochenko. Bremsstrahlung from 7-10 MeV Electrons in Thin Silicon Crystals. (E/T) – 631 [807]
– (See Ivanov, D. P.) – 603 [770]
Komar, E. G. (See Abrosimov, N. K) – 1399 [1769]
Komarov, G. P. (See Gak, E. Z.) – 1578 [1996]
Komarov, V. L., S. G. Tsepakin, and G. V. Chemyakin. High-Frequency Source of Heavy Ions. (E) – 150 [198]
Komel'kov, V. S. and V. I. Modzolevskii. Formation of a Plasma Jet in Air at Atmospheric Pressure. (E/T) – 758 [963]
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– (See Ignatov, A. B.) – 550 [701]
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Kondurova, L. N. and A. I. Smirnov. Holography of Small Periodic Objects. (T) – 820 [1043]
Kononenko, S. G., L. D. Lobzov, L. V. Reprintsev, and A. M. Shenderovich. Longitudinal Beam Instability in a Storage Ring. I. (T/E) – 999 [1272]

– L. D. Lobzov, L. V. Reprintsev, and A. M. Shenderovich. Longitudinal Beam Instability in a Storage Ring. II. (T/E) – 1006 [1281]

Konstantinov, B. P., I. O. Lashevskii, V. S. Olenik, and M. V. Stabnikov. Selective Microanalysis with a Diffusion Chamber. (E) – 506 [650]

Konstantinov, S. G. and F. A. Tsel'nik. Electric Potential Distribution in a Magnetoactive Plasma. (T/E) – 382 [493]

– O. K. Myskin, A. F. Sorokin, and F. A. Tsel'nik. Low-Density Rotating Plasma in a Mirror. (E) – 2006 [2527]

Konstantinov, V. B. and V. I. Kochenov. Parasitic Interference Structures in the Interference-Diffraction Method of Studying High-Resolution Photographic Materials. (T) – 2086 [2626]

– (See Gusev, O. B.) – 170 [222]

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– (See Dudko, D. Ya.) – 919 [1164]

Koreshchenko, N. A. (See Kalygin, A. G.) – 1650 [2084]

Korkosh, D. N. (See Gurvich, D. B.) – 1480 [1870]

Korobkin, V. V., A. A. Malyutin, and M. Ya. Shchelev. Time Resolution of a PIM-UMI Image Converter. (E) – 165 [216]

– and L. N. Pyatnitskii. Interferometer for Measuring Refractive Index of a Time-Varying Plasma. (E) – 336 [440]

Korobochko, Yu. S. and K. S. Shilkov. 0.7 MeV Iron-Free Betatron with Zero Magnetic Field Decay. (T/E) – 468 [603]

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– (See Komar, A. P.) – 631 [807]

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Korshunov, A. B. (See Volkov, B. I.) – 1710 [2159]

Korsunskii, A. M. and N. S. Repalov. Modulated Relativistic Electron Beams. (T) – 648 [826]

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Korzh, V. G., V. G. Padalka, A. P. Strashko, and V. T. Tolok. Polarization Interaction of Plasma Streams in a Toroidal Magnetic Field. (E) – 718 [910]

Kosarev, E. L., V. G. Zatsepin, and A. V. Mitrofanov. Decimeter Emission from Straight Lightning. (E) – 237 [315].

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Kosik, N. A. (See Borovik, E. S.) – 1035 [1316]

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– (See Grachev, M. I.) – 1435 [1812]

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– (See Grishin, S. F.) – 1197 [1525]

Kovalev, A. V. (See Bogdanov, S. V.) – 1186 [1511]

Koval'skii, N. G., B. I. Khripunov, and S. A. Chuvatin. High-Frequency Modulation of an Electron Beam and Production of Fast Ions in a Cold Plasma. (E) – 232 [308]

Kovnatskii, A. M. Excitation of Flexural Waves in a Thin Plate by Thermomagnetic Waves. (T) – 1392 [1762]

Kovrov, P. E. (See Knyazyatov, A. S.) – 707 [895]

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Kozlov, N. P. and V. I. Khvesyuk. Heating of "Cold" Cathodes in Electric Arcs. (T) – 97 [131]

– and V. I. Khvesyuk. Cathode Processes in Electric Arcs. I. (T) – 1691 [2135]

– and V. I. Khvesyuk. Cathode Processes in Electric Arcs. II. (T) – 1697 [2142]

– (See Kalygin, A. G.) – 1650 [2084]

Kozyrev, A. N., V. M. Kuznetsov, B. P. Peregud and Z. [illegible] Fedichkina. Topological Stability of the Magnetic Field [illegible] Tornado-2. (T) – 1830 [2305]

Krachino, T. V. (See Matskevich, T. L.) – 934 [1182]

Kramskoi, G. D., A. I. Zykov, I. A. Grishaev, and Z. M. Kolot. Dispersion Characteristics of a Circular Iris-Loaded Waveguide with Radial Slots ($\pi/2$ Mode). (E) – 439 [567]

Krasovitskii, V. B. Acceleration of a Modulated Beam of Charged Particles in a Medium with Inverted Population Levels. (T) – 864 [1093]

– (See Namitokov, K. K.) – 1872 [2357]

Kreindel', Yu. E. and V. A. Nikitinskii. Constricted Cold-Cathode Arc. (E) – 242 [323]

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– (See Zlobina, A. F.) – 1708 [2156]

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Krivets, V. P. and B. P. Peregud. Heating and Compression of Plasmas with Nonadiabatic Particle Motion. (T) – 928 [1174]

– (See Wilhelmsson, H.) – 834 [1059]

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Kruzhalov, S. V. Traveling-Wave Laser Using the Faraday Effect in an Active Field. (E) – 2081 [2621]

– and N. M. Kozhevnikov. Experimental Determination of the Polarization Characteristics and Losses of Anisotropic Laser Resonators. (E) – 2083 [2622]

Krylova, T. A. (See Kagan, Yu. M.) – 88 [120]

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Kucherov, R. Ya., V. K. Nevolin, G. I. Tkeshelashvili, and V. P. Tsiberev. Arc Regime in a Low-Pressure Cesium Thermionic Converter. (E) – 100 [135]

– V. K. Nevolin, and V. I. Yarygin. Influence of Magnetic Field on the Voltage-Current Characteristics of a Cs–Ba Thermionic Converter. (T) – 450 [581]

– (See Karakhanov, V. Ya.) – 109 [147]

– (See Karakhanov, V. Ya.) – 1383 [1752]

Kudelainen, V. I., I. N. Meshkov, and R. A. Salimov. Shaping of an Intense Electron Beam in a Magnetic Field. (T/E) – 1821 [2294]

Kulikov, A. V. (See Abrosimov, N. K.) – 963 [1222]

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Kuril'nikov, S. V. (See Iremashvili, D. V.) – 1278 [1624]

Kushin, V. V. and I. D. Dreval'. Limiting Current in a Linear Accelerator with Variable-Phase Focusing. (T/E) – 464 [598]

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– (See Ageev, V. N.) – 841 [1065]

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Kuznetsov, V. S., M. A. Abroyan, A. I. Solnyshkov, and R. P. Fidel'skaya. Phase-Density Redistribution in Charged-Particle Beams. (E/T) – 1268 [1611]

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– (See Kagan, Yu. M.) – 1627 [2053]
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Malyshev, I. F., V. I. Peregud, A. V. Popkovich, and V. I. Shalmanov. Vacuum System of the Leningrad 1-GeV Synchrocyclotron. (E) – 1420 [1793]
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Ion Component in Cathode Sputtering of Metals. (E) A. A. Adylov, V. I. Veksler, and A. M. Reznik – 1588 [2005]
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Electron Avalanche in a Weak Electric Field. (T) K. K. Namitokov, V. B. Krasovitskii, and Ya. N. Shnaider – 1872 [2357]
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Voltage Arc in Cesium Vapor and Low-Pressure Cesium Arc. (E) G. A. Dyuzhev, B. Ya. Moizhes, E. A. Startsev, and V. G. Yur'ev – 1900 [2393]
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Reduction of Divergence of an Electron Beam Emitted by a Field-Emission Cathode. (E) D. M. Pautov and I. L. Sokol'skaya – 1581 [1999]
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Microwave Discharge in Strong Magnetic Fields. (E) V. I. Arkhipenko, V. N. Budnikov, and A. A. Obukhov – 1855 [2337]
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Electrical Breakdown of the Space between a Plasma and a Positive Electrode. (T). Yu. E. Kreindel' and V. A. Nikitinskii – 1888 [2378]
Relaxation of the Cathode Beam in a Low-Temperature Plasma. (T/E) G. A. Dyuzhev, B. Ya. Moizhes, V. A. Nemchinskii, E. A. Startsev, S. M. Shkol'nik, and V. G. Yur'ev – 1910 [2406]
Measurement of Magnetic Field in a Plasma with a Charged-Particle Beam. (T/E) A. A. Kalmykov, A. D. Timofeev, and B. A. Shevchuk – 1938 [2442]
Plasma Penetration near the Lower Hybrid Frequency. (T) V. E. Golant – 1980 [2492]
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Low-Density Rotating Plasma in a Mirror. (E) S. G. Konstantinov, O. K. Myskin, A. F. Sorokin, and F. A. Tsel'nik – 2006 [2527]
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Effect of Acceleration of Slow Electromagnetic Waves on Radiation from an Inhomogeneous Beam–Plasma System. (T/E) V. O. Aleksandrov, A. P. Zhilinskii, and V. I. Fedorov – 1769 [2230]
Microwave Plasma Radiation. (E) V. Ya. Balakhanov, V. A. Vershkov, V. K. Zhivotov, O. A. Zinov'ev, V. D. Rusanov, and A. V. Titov – 1772 [2233]
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Suppression of the Flute Instability in a Low-Density Plasma by a Feedback System with a Finite Number of Elements. (T) V. V. Arsenin, T. G. Dement'eva, and D. P. Kostomarov – 1616 [2040]
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Radial Distribution of an Instability in an Afterglow in a Magnetic Field. (E) V. V. Bulanin and A. P. Zhilinskii – 1960 [2469]

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Energy Characteristics of a Coaxial Plasma Source. (E/T) A. G. Belikov, V. P. Goncharenko, D. K. Goncharenko, N. T. Derepovskii, B. G. Safronov, and N. A. Khizhnyak – 1488 [1881]
Plasmoid Transport by Quadrupole and Octupole Magnetic Fields. (E) I. I. Demidenko, N. S. Lomino, and V. G. Padalka – 1492 [1887]
Electrical Polarization of a Plasma Stream in an Axially Symmetric Magnetic Field. (E/T) Yu. S. Azovskii, I. T. Guzhovskii, and N. A. Khizhnyak – 1496 [1893]
Induced Poloidal Current in a Plasma Stream in an Inhomogeneous Axisymmetric Magnetic Field. (T/E) Yu. S. Azovskii, I. T. Guzhovskii, and N. A. Khizhnyak – 1502 [1901]
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Constant Voltage in a Plasma–Selenium–Metal Structure. (E) A. D. Andreev – 1191 [1517]
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Electron Transport Coefficients in Gases and Semiconductors. (E) – Yu. B. Golubovskii and R. I. Lyagushchenko – 1947 [2454]

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Constant Voltage in a Plasma–Selenium–Metal Structure. (E) A. D. Andreev – 1191 [1517]
Physicochemical Processes in Mercury Vapor in a Shock Tube. I. Gas State ahead of the Shock Front. (E/T) G. K. Tumakaev, T. V. Zhikhareva, and V. R. Lazovskaya – 1570 [1986]
Ionization and Optical Absorption behind a Strong Wave in Hydrogen. (T) S. I. Anisimov and V. I. Fisher – 2041 [2571]

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Electron Emission Bursts from a Liquid Gallium Cathode. (E) I. Yu. Bartashyus, L. I. Pranevichnyus, and G. N. Fursei – 1535 [1943]
Surface Breakdown in Vacuum on Barium Titanate. (E) S. P. Bugaev, V. V. Kremnev, Yu. I. Terent'ev, V. G. Shpak, and Ya. Ya. Yurike – 1547 [1958]
Thermionic Emission of an Ir(111)–C Film. (T/E) É. Ya. Zandberg, A. Ya. Tontegode, and F. K. Yusifov – 1920 [2420]
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Diffusion of Oxygen in a Metal in Electron Bombardment of the Surface. (T) S. P. Zholobov and M. D. Malev – 488 [627]

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Heating Dynamics of Laser Damage Sites. (E) N. F. Pilipetskii, N. F. Taurin, and V. A. Épshtein – 1180 [1502]

Measurement of Isothermal Heats of Evaporation and Mean Lifetimes for Positive and Negative Ions on Solid Surfaces. (E) A. Ya. Tontegode and F. K. Yusifov – 1353 [1717]

Initiation of a Vacuum Discharge by Metal Particles on an Electrode. (E/T) E. P. Martynov – 1364 [1731]

Surface Breakdown in Vacuum on Barium Titanate. (E) S. P. Bugaev, V. V. Kremnev, Yu. I. Terent'ev, V. G. Shpak, and Ya. Ya. Yurike – 1547 [1958]

Determination of the Electron Affinity of Silicon and Germanium Atoms by Surface Ionization. (E) É. Ya. Zandberg, A. G. Kamenev, and V. I. Paleev – 1567 [1983]

Ion Component in Cathode Sputtering of Metals. (E) A. A. Adylov, V. I. Veksler, and A. M. Reznik – 1588 [2005]

Kinetics of Oxygen Chemisorption on Iridium. (E) V. N. Ageev and N. I. Ionov – 1742 [2196]

Breakdown (Sparking) of Oxide Cathodes. (E) B. Ya. Moizhes and S. Sh. Rutshtein – 1748 [2203]

Ionization and Ion Charge Exchange in the Cathode Spot of a Vacuum Arc. (T) R. B. Nagaibekov – 1865 [2350]

Dielectric Strength of a Vacuum Gap with Processed Electrodes. (E) A. S. Pokrovskaya-Soboleva, T. S. Borisova, and L. K. Mazurova – 1876 [2363]

Cathode State near Spots in a Vacuum Arc. (T/E) I. Kh. Bekbulatov and R. B. Nagaibekov – 1892 [2383]

Electrode Current Density on Electrodes in a High-Current Vacuum Discharge. (E) Yu. P. Rylov and Z. A. Pigulevskaya – 1957 [2466]

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Thermal Dissociation of $SrCl_2$ Molecules at a Tungsten Surface. (E) M. V. Loginov and M. A. Mittsev – 557 [709]

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Heating and Compression of Plasmas with Nonadiabatic Particle Motion. (T) V. P. Krivets and B. P. Peregud – 928 [1174]

Heating Dynamics of Laser Damage Sites. (E) N. F. Pilipetskii, N. F. Taurin, and V. A. Épshtein – 1180 [1502]

Thermomolecular Pressure Difference for Statistical Models. (T) P. E. Suetin, S. G. Skakun, and V. G. Chernyak – 1370 [1738]

Excitation of Flexural Waves in a Thin Plate by Thermomagnetic Waves. (T) A. M. Kovnatskii – 1392 [1762]

Temperature of a Low-Density Medium from Limiting-Angle Scattering. (T) V. V. Afrosimov and A. I. Kislyakov – 1526 [1933]

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